

# PATENT SPECIFICATION (11)

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## (54) SCOT JUBILEE JET PROPELLER

(71) I, JAMES BOWMAN, "Hermione"  
 11 Milton Place, Pittenweem, Fife, British, do  
 hereby declare the invention, for which I  
 pray that a patent may be granted to me,  
 5 and the method by which it is to be per-  
 formed, to be particularly described in and  
 by the following statement:—

This invention relates to improvements in  
 propellers mainly for marine purposes al-  
 though the invention may be applied to  
 10 aircraft, hovercraft or large volume, low  
 pressure pumping of fluids and in the latter  
 case high pressure can be obtained by having  
 one propeller after another.

15 According to the present invention, a  
 propeller has a frusto-conical shroud with  
 conical inner and outer surfaces fixed to the  
 blades of the propeller, a hub which in that  
 region where the blades are attached in-  
 creases in diameter in the direction in which  
 20 the shroud decreases in diameter, and a boss  
 attached to the hub which projects beyond  
 the shroud at its low diameter end.

A ship makes considerable aeration im-  
 25 mediately forward of the propeller which the  
 cone by squeezing turns this soft water into  
 more solid water. Further into the cone the  
 blades and hub squeeze the water firmer still  
 and thrust it aft. However in the region of  
 30 the blades, a vacuum factor develops on  
 conventional propellers which is overcome  
 in the present invention by the increasing  
 diameter of the hub together with the de-  
 creasing diameter of the shroud so that the  
 35 vacuum area becomes a pressure area. The  
 boss extending clear of the shroud may be  
 constructed and streamlined as is most  
 suitable. The boss in a large deep-drafted

ship may be fitted with a non-return air  
 pressure valve.

The invention is more particularly de-  
 scribed with reference to the accompanying  
 drawing of a sectional elevation through the  
 propeller.

In the drawing a propeller with a hub 1  
 45 has blades 2 which are connected to a shroud  
 3 which is of frusto-conical shape with  
 conical inner and outer surfaces. The hub 1  
 is extended outside of the shroud by a boss  
 4. It can be seen that the radius of the hub  
 50 increases continuously in the region de-  
 noted by lines AA where the blades are con-  
 nected to the hub by an amount "d" and in  
 the direction in which the diameter of the  
 shroud is decreasing. The maximum and  
 55 minimum diameters of the shroud are 28  
 and 25 inches respectively. The length is 7  
 inches making an angle of 18° which is con-  
 sidered to give maximum efficiency.

The boss is hollow and defines with its  
 60 walls and sealing plate 5 a chamber 6 wherein  
 air can be pressurised by way of a non-  
 return air pressure valve 7.

### WHAT I CLAIM IS:—

1. A propeller comprising a frusto-  
 conical shroud with conical inner and outer  
 surfaces fixed to the blades of the propeller, a  
 hub which in that region where the blades are  
 attached increases in diameter in the direction  
 70 in which the shroud decreases in diameter  
 and a boss attached to the hub which pro-  
 jects beyond the shroud at its low diameter  
 end.

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COMPLETE SPECIFICATION

1 SHEET

*This drawing is a reproduction of  
the Original on a reduced scale*

